



FORM PTO - 1449 INFORMATION DISCLOSURE STATEMENT		ATTORNEY DOCKET NO.: VXM-001B APPLICANT(S): Vitaliano et al. SERIAL NO.: 10/661,466 FILING DATE: September 11, 2003 GROUP: 1631
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## U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
<i>[Signature]</i>	A1	4,367,066	01/04/83	Zellweger, S.	434	433	
	A2	4,999,842	3/12/91	Huang et al.	372	45	
	A3	5,287,377	02/15/94	Fukuzawa et al.	372	45	
	A4	5,613,140	03/18/97	Taira, K.	395	800	
	A5	5,671,437	09/23/97	Taira, K.	395	800	
	A6	5,838,436	11/17/98	Hotaling et al.	356	345	
	A7	5,940,193	08/17/99	Hotaling et al.	359	11	
	A8	6,437,413 B1	08/20/02	Yamaguchi et al.	257	421	
	A9	6,456,994 B1	09/24/02	Tucci, R.	706	52	
	A10	6,459,097 B1	10/01/02	Zagoskin, A.	257	31	
<i>[Signature]</i>	A11	6,472,681 B1	10/29/02	Kane, B.	257	14	

## FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

## OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)	
<i>[Signature]</i>	C1	Abe, E. (2001) "ESR on Shallow Donors in Ge," (PowerPoint Presentation)
<i>[Signature]</i>	C2	Barenco et al. (1996) "A short introduction to quantum computation," <a href="http://www.qubit.org/library/intros/comp/comp.html">www.qubit.org/library/intros/comp/comp.html</a> .
<i>[Signature]</i>	C3	Bayer, M. (August 8, 2002) "One at a time, please," <i>Nature</i> 418: 597-598.

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	C4	Benjamin et al. (date unknown) "Towards Quantum Information Technology," <a href="http://www.qubit.org/library/intros/nano/nano.html">www.qubit.org/library/intros/nano/nano.html</a>  NO DATE
<i>Vitaliano</i>	C5	Blatt, R. (2001) "Delicate information," <i>Nature</i> 412: 773.
<i>Vitaliano</i>	C6	Borbat et al. (April 19, 2002) "Protein Structure Determination Using Long-Distance Constraints from Double-Quantum Coherence ESR: Study of T4 Lysozyme," <i>J. Am. Chem. Soc.</i> 124: 5304-5314.
	C7	Brown J. (2000) "Minds, Machines and the Multiverse (The Quest for the Quantum Computer)," Chapter 1, Simon & Schuster 2000
	C8	Cheetham et al. (1996) "Inhibition of hsc70-catalysed clathrin uncoating by HSJ1 proteins," <i>Biochem J.</i> 319: 103-108.
	C9	Claeyse et al. (November 18, 2002) "A Single Mutation in the 5-HT <sub>4</sub> Receptor (5-HT <sub>4</sub> -R D100(3.32)A) Generates a G <sub>s</sub> -coupled Receptor Activated Exclusively by Synthetic Ligands (RASSL)," <i>Journal of Biological Chemistry</i> 278: 699-702
	C10	Claing et al. (2001) β-Arrestin-mediated ADP-ribosylation Factor 6 Activation and β <sub>2</sub> -Adrenergic Receptor Endocytosis," <i>Journal of Biological Chemistry</i> 276: 42509-42513
	C11	Coward et al. (1998) "Controlling signaling with a specifically designed G <sub>i</sub> -coupled receptor," <i>Proc. Natl. Acad. Sci. USA</i> 95: 352-357
	C12	Crotzer, V. L. et al. (2001) "The Role and Regulation of Clathrin in T cell Receptor Internalization," (Abstract) <a href="http://www.midwconimmunol.org/Midwinter01/posters/crotzer.html">www.midwconimmunol.org/Midwinter01/posters/crotzer.html</a>
	C13	Deutsch et al. (1998) "Quantum Computation," <a href="http://www.qubit.org/library/intros/PhysicsWorld/PhysicsWorld.html">www.qubit.org/library/intros/PhysicsWorld/PhysicsWorld.html</a> , Page 1 only.
	C14	De Martini et al. (October 24, 2002) "Experimental realization of the quantum universal NOT gate," <i>Nature</i> 419: 815-818
	C15	DiVincenzo, D. (1996) "Gates and Circuits: Sleator-Weinfurter construction: V <sup>2</sup> =U," <i>Phil Trans. R. Soc. Lond. A:</i> 9-18.
<i>Vitaliano</i>	C16	DiVincenzo, D. (1997) "Quantum Gates and Circuits," <i>Phil Trans. R. Soc. Lond. A.</i> , Submitted
	C17	DiVincenzo, D. (1998) 'Real and realistic quantum computers," <i>Nature</i> 393: 113-114.
	C18	Dowling et al. (date unknown) "Electron Nuclear Double Resonance Quantum Computer"
<i>Vitaliano</i>	C19	Follstaedt et al. (2000) "Protein Adhesion on SAM Coated Semiconductor Wafers: Hydrophobic Versus Hydrophilic Surfaces," Sandia Report SAND_2000-3016
	C20	Gad, H. et al. (2000) "Fission and uncoating of synaptic clathrin-coated vesicles are perturbed by disruption of interactions with the SH3 domain of endophilin," <i>Nature</i> 27:301-312 (Abstract only)
	C21	Gad, H. (2000) "Synaptic vesicle endocytosis studied in a living synapse," (Ph.D. Thesis) Karolinska Institute. (conclusions drawn from Ph.D. thesis)
<i>Vitaliano</i>	C22	Gershenson et al. (1998) "Quantum Computing with Molecules," <i>Scientific American</i> . June 1998 ( <a href="http://www.media.mit.edu/physics/publications/papers/98.06.sciam/0698gershenfeld.html">www.media.mit.edu/physics/publications/papers/98.06.sciam/0698gershenfeld.html</a> )

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	C23	Gisin, N. (October 24, 2002) "NOT logic," <i>Nature</i> 419: 797-798.	
	C24	Greene et al. (2000) "Complete Reconstitution of Clathrin Basket Formation with Recombinant Protein Fragments: Adaptor Control of Clathrin Self-Assembly," <i>Traffic</i> 1: 69-75.	NO DATE
	C25	Hameroff, S. (date unknown) "What is Consciousness," <a href="http://www.consciousness.arizona.edu/hameroff/slideshow/slideshow_6.htm">www.consciousness.arizona.edu/hameroff/slideshow/slideshow_6.htm</a>	NO DATE
	C26	Hameroff, S. (date unknown) "Quantum computation in brain microtubules? The Penrose-Hameroff "Orch OR" model of consciousness," <a href="http://www.consciousness.arizona.edu/hameroff/Pen-Ham/Orch_OR/Royal%20Society.htm">www.consciousness.arizona.edu/hameroff/Pen-Ham/Orch_OR/Royal%20Society.htm</a>	NO DATE
	C27	Hameroff et al (1998) "Quantum Theory and Human Consciousness," 47-62	
	C28	Hardy et al. (2000) "Universal Manipulation of a Single Qubit," Centre for Quantum Computation, Clarendon Laboratory, Department of Physics, University of Oxford.	
	C29	Harneit et al. (date unknown) "N@C <sub>60</sub> for Quantum Computing," ...	
	C30	Harneit et al. (July 20, 2002) "Architectures for a Spin Quantum Computer Based on Endohedral Fullerenes," <i>Phys. Stat. Sol.</i> 233: 453-461.	
	C31	Haucke V., "Molecular Mechanisms of Endocytosis," INABIS '98	
	C32	Henderson et al. (date unknown) "CQC Introductions: Quantum Entanglement." <a href="http://www.qubit.org/library/intros/entang/index.html">www.qubit.org/library/intros/entang/index.html</a>	NO DATE
	C33	Hubbell et al. (1998) "Recent advances in site-directed spin labeling of proteins," <i>Current Opinion in Structural Biology</i> 8: 649-656	
	C34	Jaksch et al. (date unknown) "Review of quantum computer implementations with quantum optical systems," Institute for Theoretical Physics, Innsbruck (PowerPoint Presentation)	NO DATE
	C35	Kanaseki et al. (1969) "The Vesicle in a Basket: A Morphological Study of the Coated Vesicle Isolated from the Nerve Endings of the Guinea Pig Brain, with Special Reference to the Mechanism of Membrane Movements," <i>Journal of Cell Biology</i> 42: 202-220.	
	C36	Keen, description of Keen laboratory research	NO DATE
	C37	Kirchhausen, T. et al. (1997) "Linking cargo to vesicle formation: receptor tail interactions with coat proteins," <i>Current Opinion in Cell Biology</i> 9: 488-495	
	C38	Koruga, D. (date unknown) "From Natural to Artificial Molecular Machines," (Abstract 6 <sup>th</sup> Foresight from the Conference on Molecular Nanotechnology) <a href="http://www.foresight.org/Conferences/MNT6/Abstracts/Koruga/">www.foresight.org/Conferences/MNT6/Abstracts/Koruga/</a>	NO DATE
	C39	Laflamme et al. (August 22, 2002) "NMR GHZ" ( <a href="http://www.arxiv.org">www.arxiv.org</a> )	
	C40	Leuenberger et al. (2001) "Quantum computing in molecular magnets," Department of Physics and Astronomy, University of Basel, Switzerland.	
	C41	Liu et al. (1995) "Regulation of Clathrin Assembly and Trimerization Defined Using Recombinant Triskelion Hubs," <i>Cell</i> 83: 257-267	

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<i>M</i>	C42	Liu et al. (2001) "Observation of coherent optical information storage in an atomic medium using halted light pulses," <i>Nature</i> 409: 490-493	<i>NO DATE</i>
	C43	Loss, D. (date unknown) "Spin-based Quantum Information Processing in Nanostructures," Department of Physics, University of Basel, Switzerland - (PowerPoint Presentation)	<i>NO DATE</i>
<i>M</i>	C44	Mekis, A. et al. (1995) "Ray chaos and Q-spoiling in Lasing Droplets," <i>Phys. Rev. Lett.</i> 75: 2682-2686	<i>NO DATE</i>
	C45	Mullins, J. (2001) "The Topsy Turvey World of Quantum Computing," <i>IEEE Spectrum</i> : 42-49.	
	C46	Myers, T. (date unknown) "From NANDS to Neurons: A Look at Alternative Approaches to Information Processing," <a href="http://www.cs.wayne.edu/~tom/csc888/csc888.html">www.cs.wayne.edu/~tom/csc888/csc888.html</a>	
<i>M</i>	C47	Nöckel, J. U. et al. (1996) "Chaotic Light: A Theory of Asymmetric Resonant Cavities," <i>Optical Processes in Microactivities</i> , World Scientific Publishers, 1996	<i>NO DATE</i>
<i>M</i>	C48	Nöckel, J. U. et al. (1994) "Q-spoiling and Directionality in Deformed Ring Cavities," <i>Optics Letters</i> 19: 1693-1695	
	C49	Oskin et al. (January 2002) "A Practical Architecture for Reliable Quantum Computers," <i>Computer</i> : 79-87.	
<i>M</i>	C50	Owen, D.J. (2000) "The structure and function of the $\beta$ 2-adaptin appendage domain," <i>EMBO Journal</i> 19: 4216-4227	<i>NO DATE</i>
	C51	Pan et al. (date unknown) "A Precision Technology for Controlling Protein Adsorption and Cell Adhesion in Biomems," (manuscript)	
<i>M</i>	C52	Preskill, J. (1997) "Reliable Quantum Computers," (manuscript) California Institute of Technology. ( <a href="http://www.arxiv.org">www.arxiv.org</a> )	<i>NO DATE</i>
	C53	Redfern, C. (1999) "Conditional expression and signaling of a specifically designed Gi-coupled receptor in transgenic mice," <i>Nature Biotechnology</i> 17: 165-169	
	C54	Recher et al. (2000) "Quantum Dot as Spin Filter and Spin Memory," <i>Physical Review Letters</i> : 85 1962-1965.	
	C55	Rieffel et al. (2000) "An Introduction to Quantum Computing for Non-Physicists," <i>ACM Computing Surveys</i> 32: 300-335.	
	C56	Scearce-Levie et al. (2001) "Engineering receptors activated solely by synthetic ligands (RASSLs)," <i>Trends in Pharmacological Sciences</i> 22: 414-420	
<i>M</i>	C57	Shih, W. et al. (1995) "A Clathrin-binding Site in the Hinge of the $\beta$ 2 Chain of Mammalian AP-2 Complexes, <i>The Journal of Biological Chemistry</i> 270: 31083-31090.	<i>NO DATE</i>
	C58	Smith, T. (date unknown) "Why do I like Clifford Algebras?," <a href="http://innerx.net/personal/tsmith/clifpg.html">www.innerx.net/personal/tsmith/clifpg.html</a>	
	C59	Smith, T. (date unknown) "Quantum Consciousness," <a href="http://innerx.net/personal/tsmith/QuanCon.html">www.innerx.net/personal/tsmith/QuanCon.html</a>	
<i>M</i>	C60	Steane, A. (1996) "Quantum Error Correction," <a href="http://www.qubit.org/library/intros/QEC.html">www.qubit.org/library/intros/QEC.html</a>	<i>NO DATE</i>

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	C62	Steane, A. (1998) "Quantum Computing," <i>Reports on Progress in Physics</i> 61: 117-173
	C63	Steane et al. (2000) "Physicists Triumph at Guess My Number," <i>Physics Today</i> , 35-39
	C64	Takei et al. (1998) "Generation of Coated Intermediates of Clathrin-Mediated Endocytosis on Protein-Free Liposomes," <i>Cell</i> 94: 131-141
<i>D</i>	C65	Twamley, J. (October 30, 2002) "Quantum cellular automata quantum computing with endohedral fullerenes," (manuscript) ( <a href="http://www.arxiv.org">www.arxiv.org</a> )
	C66	Van Koppen, C. J. (date unknown) "Multiple pathways for the dynamin-regulated internalization of muscarinic acetylcholine receptors" (Abstract)
<i>M</i>	C67	Vitaliano, F. (2001) "The Next Big Thing That Will Change Absolutely Everything," <a href="http://www.vxm.com/Speed.quantum.html">www.vxm.com/Speed.quantum.html</a>
	C68	Vitaliano, F. (June 18, 2002) "VXMaia: A New Quantum Computing System," (PowerPoint Presentation)
	C69	Vitaliano, F. (October 23, 2002) "VXMaia: A New Quantum Computing System for Biotech," (PowerPoint Presentation)
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	C74	Volovich I.V. (1999) "Atomic Quantum Computer," (manuscript) ( <a href="http://www.arxiv.org">www.arxiv.org</a> )
	C75	Vrijen et al. (1999) "Electron Spin Resonance Transistors for Quantum Computing in Silicon-Germanium Hetero-structures," (manuscript) ( <a href="http://www.arxiv.org">www.arxiv.org</a> )
	C76	Ybe et al. (1998) "Clathrin self-assembly is regulated by three light-chain residues controlling the formation of critical salt bridges," <i>The EMBO Journal</i> 17: 1297-1303.
<i>V</i>	C77	Ybe et al. (1999) "Clathrin Structure Reveals Motifs for Self Assembly," <a href="http://www.als.lbl.gov/als/science/sci_archive/clathrin.html">www.als.lbl.gov/als/science/sci_archive/clathrin.html</a>
	C78	Ybe et al. (date unknown) "Crystal structure of a repeating superhelix motif in the clathrin triskelion leg."
<i>M</i>	C79	Ybe et al. (2000) "Molecular Structures of Proteins Involved in Vesicle Fusion," <i>Traffic</i> 1: 474-479.
	C80	"Adaptin G", (date unknown) Catalog number A35620. Transduction Laboratories, 133 Venture Court, Lexington, KY 40511-2624
	C81	"Basic EPR Theory" (date unknown)

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	C82	Centre for Quantum Computation, <a href="http://www.qubit.org">www.qubit.org</a> (date unknown) <span style="float: right;">NO DATE</span>
	C83	"Continuous Wave ENDOR," (date unknown) <span style="float: right;">NO DATE</span>
<i>✓</i>	C84	"Electron Spin Resonance (ESR)," (2000) Physics 77, Experiment 6 <span style="float: right;">NO DATE</span>
	C85	"EPR Continuous Wave Practice Page," <a href="http://www.bruker-biospin.com/brukerepr/continuouswavepractice.html">www.bruker-biospin.com/brukerepr/continuouswavepractice.html</a> (date unknown) <span style="float: right;">NO DATE</span>
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	C87	"Introduction to Mass Spectrometry," <a href="http://masspec.scripps.edu/information/intro/chapter3.html">masspec.scripps.edu/information/intro/chapter3.html</a> (date unknown) <span style="float: right;">NO DATE</span>
<i>✓</i>	C88	"pET-15b Vector," (1998), Novagen Catalog <span style="float: right;">NO DATE</span>
<i>✓</i>	C89	"pET-23a-d(+) Vectors," (1998), Novagen Catalog <span style="float: right;">NO DATE</span>
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	C92	"Receptor Mediated Endocytosis," <a href="http://www.erin.utoronto.ca/~w3bio315/RME.htm">www.erin.utoronto.ca/~w3bio315/RME.htm</a> (date unknown) <span style="float: right;">NO DATE</span>
	C93	"Simple quantum gates," <a href="http://www.qubit.org/library/intros/comp/inset2.html">www.qubit.org/library/intros/comp/inset2.html</a> (date unknown) <span style="float: right;">NO DATE</span>
	C94	"Universal gates," <a href="http://planck.thphys.may.ie/jtwamley/thesis/Hovland/thesis/node17.shtml">http://planck.thphys.may.ie/jtwamley/thesis/Hovland/thesis/node17.shtml</a> (date unknown) <span style="float: right;">NO DATE</span>
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